

REMARKS

Prior to the examination of the claims required by the Request for Continued Examination filed on July 8, 2005, Applicant has additionally amended the claims by canceling Claims 1, 2 and 4-6 and replacing them with newly presented Claims 7-10. Newly presented Claim 7 contains the subject matter of Claims 1, 2 and 4 and newly presented Claim 8 contains the subject matter of originally presented Claim 5. Newly presented Claim 9 contains the subject matter of canceled Claim 6 and newly presented Claim 10 contains the subject matter of canceled Claims 2 and 4. No new matter has been added.

The present invention is based on the discovery that a high production yield and purity of 3-chloro-5-nitrotoluene is obtained by using t-butylhypochlorite as a chlorinating agent at the specified deamination temperature. With the present invention, the intended product is provided in a high production yield and purity so that no further purification is needed. This enables industrial production to be carried out effectively. The synergistic effect achieved through the use of the claimed chlorinating agent and deamination temperature is more than sufficient to rebut any showing of prima facie obviousness under 35 USC 103.

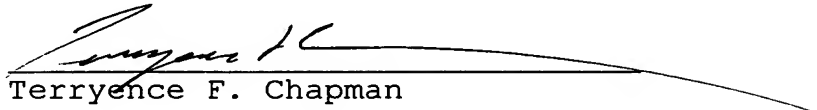
The features of the present invention and the references cited by the Examiner are presented in the Table below.

	Grella et al	The Invention	Metzger
In the 1 st step of chlorination			
Chlorinating agent	N-chloro-succinic imide	t-butyl-hypochlorite	N-chloro-succinic imide
Solvent	Acetonitrile	Toluene	Dry benzene
Temperature and time of chlorination	At room temperature for one night	At room temperature for 3 hours	At 53-78°C for not less than 3.5 hours

Product and purification	Removal of acetonitrile and purification by flash chromatography	Filtered and washed with aqueous ethanol	1. Removal of insoluble in benzene. 2. Concentrating a filtrate liquid, adding chloroform to the liquid and filtering out the insoluble. 3. Concentrating the filtrate liquid, dissolving it in chloroform and standing it for recrystallization
Production yield	29%	80%	13%
In the 2 nd step of deamination			
Reaction temperature and time.	1) At room temperature for 30 min 2) Reflux until no foaming	1) At room temperature (but raised to about 40°C due to reaction heat) 2) Reflux until no foaming while keeping at 40 to 50°C	
Production and purification	1) Concentrating, diluting with water and extracting with ethyl acetate 2) Removal of ethyl acetate and purification by flash chromatography	Cooling and filtering precipitates	
Production yield	69%	90%	-

As can be seen from the above Table, the presently claimed invention clearly is superior in production yield to the prior art references. This is clearly unexpected in light of the prior art cited by the Examiner and establishes the patentability of the presently claimed invention thereover. The Examiner is respectfully requested to reconsider the present application and to pass it to issue.

Respectfully submitted,


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